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## Strategic Research Monthly Review

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# Strategic Research Monthly Review

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least three more are under construction. The new ships will be useful in a variety of roles, especially in supporting Chinese interests beyond coastal waters.

## Japan's Efforts To Strengthen Its Air and Naval Defenses

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Events during the past year have underscored the weaknesses of Japan's air and naval defenses and have intensified debate regarding national defense priorities and spending. Although hampered by severe political and budgetary limitations, defense planners are taking steps which will ultimately improve Japan's capability to detect and react militarily to potentially hostile air and sea activity on its periphery.

## Libyan President Grapples With Military Manpower Shortage

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Conscription, the approach most recently taken by the government to raise strength levels, is having some effect, but substantial gains over the long term are less likely. The draft is coincidentally placing strains on military housing and training facilities and, more important, on the economy.

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## East Germans Expand and Modernize Ground Force Divisions

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East Germany is improving the combat capabilities of its six ground force divisons by expanding divisional fire support elements, introducing new weapon systems, and relocating several major combat units closer to the West German border. By making East German divisions operationally more compatible with their Soviet counterparts and bringing them nearer to likely deployment areas, these changes will facilitate the wartime integration of the Warsaw Pact's forward-echelon formations.

## Chinese Push Construction of Major Surface Combatant

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Since early 1975, the Chinese have deployed five of the new Kianghu guided-missile frigates and at

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#### **East Germans Expand and Modernize Ground Force Divisions**

East Germany is improving the combat capabilities of its six ground force divisions by expanding divisional fire support elements, introducing new weapon systems, and relocating several major combat units closer to the West German border. By making East German divisions operationally more compatible with their Soviet counterparts and bringing them nearer to likely deployment areas, these changes will facilitate the wartime integration of the Warsaw Pact's forward-echelon formations.

Organizational Expansion. The East Germans have largely erased the chronic fire support deficiencies of their ground force divisions by expanding divisional artillery and air defense units and by increasing divisional tank holdings. Now virtually complete, these changes add over 400 men, 27 tanks, and 111 fire support weapons to each of the four motorized rifle divisions (see table).\* Slightly smaller increases in personnel and equipment have occurred in the two tank divisions. The most significant changes in both motorized rifle and tank divisions have been an expansion of the divisional artillery regiment and the addition of organic artillery to motorized rifle regiments. Antiaircraft battalions have also been expanded to full regiments. These divisional elements are now virtually identical to their Soviet counterparts of the mid-1970s, but they lag behind present-day Soviet units.

Modernization. The East Germans also have been slowly but systematically modernizing their divisions. New weapon systems introduced at division level since 1970 include:

- The 122-mm D-30 howitzer, which is replacing the World War II vintage 122-mm M-30 howitzer.
- The Czechoslovak RM-70 multiple rocket launcher.
- The ZSU-23-4 self-propelled (SP) AA gun, which is replacing older ZSU-57-2 SP and ZU-23 towed guns in tank and motorized rifle regiments.
- The M-1974 self-propelled 122-mm howitzer, which has apparently been introduced into at least one division.
- The SA-6 mobile SAM, which is replacing the S-60 towed gun in AA regiments.
- The BMP infantry combat vehicle, which is replacing older armored personnel carriers.
- The FROG-7, which has replaced FROG-3/5s.

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#### Major Changes in Organization and Equipment of East German Divisions

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#### Personnel

Motorized Rifle Division - 10,500 (est.)\* Tank Division - 8,500 (est.)\*

#### Motorized Rifle Regiment\*\*

31 T-54/55 tanks 6 120-mm mortars 6 BRDM Saggers

#### AA Battalion

18 57-mm cannons

#### Multiple Rocket Launcher Battery

6 122-mm launchers

#### Antitank Battery (MRDs only)

6 100-mm antitank guns

#### Artillery Regiment

36 122-mm howitzers

#### 1977

Personnel

Motorized Rifle Division - 11,400 (est.)\* Tank Division - 9,100 (est.)\*

#### Motorized Rifle Regiment\*\*

40 T-54/55 tanks 18 120-mm mortars 6 122-mm howitzers 9 BRDM Saggers

#### **AA Regiment**

24 57-mm cannons 20 SA-6 TELs (est.)

#### Multiple Rocket Launcher Battalion

18 122-mm launchers

#### Antitank Battalion (MRDs only)

18 100-mm antitank guns

#### Artillery Regiment

36 122-mm howitzers 18 130-mm guns or 152-mm howitzers

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The East Germans have not implemented their divisional expansion and modernization programs at a uniform pace. Divisional AA regiments, which were ex-

These procurement delays, which reflect both East Germany's priorities and its dependence on its Pact allies for most military equipment, have imposed low or heterogeneous equipment inventories that almost certainly cause training, supply, and movement problems. Two-battery structures, adopted to accommodate temporary shortages when divisional multiple rocket launcher and antitank battalions were formed in the mid-1970s, probably no longer exist. To maintain current equipment levels, however, each division deploys at least three of the four models of infantry transporters (BMP, BTR-152, BTR-60, and BTR-50) widely in use with the ground forces and as many as four models and three different calibers of artillery (122-mm D-30, 122-mm M-30, 152-mm D-20, and 130-mm M-46). Most divisions also apparently field both the Soviet BM-21 and Czechoslovak RM-70 rocket launcher.

Although East German divisions have been appreciably improved since 1970, they have continued to lag behind Soviet divisions. There are, however, indications that further changes similar to those observed recently in Soviet divisions may soon occur in East German divisions.

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Impact. Although not equipped according to current Soviet standards, the East Germans today are far better suited than in 1970 to assume first-echelon roles in initial Pact operations against NATO. The modernization of East German fire support units reflects renewed Soviet emphasis on massive conventional firepower in divisions and should enhance East Germany's operational utility to the Pact.
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#### **Chinese Push Construction of Major Surface Combatant**

The Chinese have embarked upon a program to beef up their force of major surface combatants. Since early 1975 they have deployed five units of a new class of guided-missile frigate—the Kianghu—and at least three more are under construction. The Kianghu effort is already as large as any major surface combatant program undertaken by the Chinese, and additional Kianghus evidently will be built. The new ships will be useful in a variety of roles, especially in supporting Chinese interests beyond coastal waters.

Earlier Programs. The Chinese have constructed four classes of large surface combatants over the years, but three of these programs were limited or encountered technological problems. The initial effort occurred in the mid-1960s when the Chinese built five Kiangnan-class frigates. The Kiangnan is a derivative of the Soviet Riga, but incorporates changes

The Chinese tried again in the late 1960s when they began work on the Luta-class destroyers. Like the Kiangnan, the Luta bears some resemblance to a Soviet ship—the Kotlin—but incorporates significant Chinese modifications. Seven Lutas were begun, and three became operational within a relatively short time. Work on the other four Lutas was protracted, however,

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In the early 1970s, the Chinese foundered in their first effort to build a frigate of entirely native design-the Kiangtung-because they had not completed development of its principal armament, a surface-to-air missile system. Although two

Kiangtungs have finished sea trials

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Impetus. The Paracel Islands clash in January 1974 evidently provided the latest impetus for expanding the force of major surface combatants, which then numbered only 17 units. The engagement apparently caused the Chinese to reassess their naval warfighting capabilities, particularly their ability to project naval power beyond coastal waters. Their initial response was to strengthen the South Sea Fleet

by increasing its force of surface combatants.

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Kianghu Design and Armaments. The rapidity of Kianghu construction probably can be attributed to the use of on-the-shelf technology and the ship's rather simple design and armaments. The Kianghu has a hull similar to that of the Kiangtung and probably utilizes the same propulsion system. In addition, the

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	Role. The size and armaments of the Kianghus will enable them to perform many different missions, including antiship and ASW.	25)
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	Significance. The Chinese apparently attach great importance to the Kianghu program, given the rapidity of construction and deployment. This priority may	
	account in part for a substantial drop in the number of submarines and missile boats produced last year, despite some apparent gaps in those forces. These programs may have been cut back to make scarce resources available for more Kianghus. The doubling of units under construction last year suggests that the Chinese plan to build a substantial number of these ships and may employ other shipyards as well.	] <u>2</u>
	The Kianghu adds an important operational capability to the Chinese Navy. Deployed in sufficient numbers, the Kianghus will enable the Chinese to project power well beyond their immediate coast and increase their capability to defend territorial claims in the South China Sea, such as the Spratly Islands. The Kianghus could also be used to protect China's interests in offshore resource exploration and	] ~
	exploitation. Many of these areas are beyond the range of China's missile boat force, and distant operations would require ships with sufficient firepower to contest challenges from other claimants. In addition, the Kianghus have an all-weather	
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## Japan's Efforts To Strengthen Its Air and Naval Defenses

Events during the past year have underscored the weaknesses of Japan's air and naval defenses and have intensified debate regarding national defense priorities and spending. Although hampered by severe political and budgetary limitations, defense planners are taking steps which will ultimately improve Japan's defensive air and sea capabilities.

25X1 intensified debate regarding national defense priorities and spending. Neverthesess, because of political constraints and the technical complexity of the systems involved, little progress has been made in improving air defenses. Such improvement will require the upgrading of aircraft, missiles, and radar systems—an expensive

effort which will take a minimum of five years.

New Aircraft and Missiles. In late 1976 the Defense Agency recommended adopting the McDonnell-Douglas F-15 fighter-interceptor as the mainstay of Japan's next generation of fighter aircraft. But although the budget for the Air Self-Defense Force increased about 12 percent this year, the National Defense Council decided to postpone purchasing the F-15 for one year and ordered the manufacture of a dozen additional F-4Js as a stopgap.

The Japanese have submitted a tentative proposal to the US Government for permission to coproduce 123 F-15s, and recently a Japanese delegation visited the US to investigate coproduction arrangements. As yet, however, no funds have been allocated for this purpose.

Tokyo must make a decision on the F-15 program in 1978 if it is to have its order included in the first production run of these aircraft. Even if purchase plans are approved next year, F-15s will not enter Japan's operational inventory before 1982.

Japan is also seeking to improve its land-based air defenses. The surface-to-air missile forces are armed with US-made Hawk missiles and a Japanese version of the Nike-Hercules missile called the Nike-J. The 1977 defense budget provides initial funds for the gradual replacement of the existing Hawk missiles with an improved version until 1983

version until 1983.

The first domestically designed surface-to-air missile system, the SR-SAM, has reached the final stages of development and will be delivered to ground force units later this year for testing. A highly mobile system comparable to the French-built Roland, the SR-SAM is designed to supplement Japan's antiaircraft artillery and Hawk missiles. The SR-SAM will probably not be available in large numbers until 1981.

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Improved Radar Systems. This spring a team of military experts made a month-long tour of US military bases and industrial facilities that manufacture air defense equipment. Although no commitments were made, the Japanese demonstrated a strong interest in the Grumman E-2C and Boeing E-3A airborne early warning systems.

Naval Defense Needs. Japan's Maritime Self-Defense Force is also likely to be expanded and modernized as a result of recent economic developments. Since the first of the year, Japan has extended its territorial waters from 3 to 12 miles, established a 200-mile fishing zone, initialed an interim fisheries agreement with the USSR, and approved an agreement with South Korea for joint offshore oil exploration and development. These actions will force the Japanese to pay increased attention to defending their maritime interests and monitoring foreign shipping, and will place increased demands on their naval and coastal patrol forces.

Coastal Patrol Expansion. Japan has already moved to strengthen its coastal patrol capabilities. The Japanese are augmenting their Maritime Safety Agency, an 11,000-man Coast Guard-type force that polices their territorial waters. This agency will rely heavily upon air surveillance, making use of long-range, fixed-wing aircraft and helicopters. A three-year development plan beginning in 1977 calls for the acquisition of two helicopter-carrying patrol ships, five YS-11 patrol aircraft, and 12 Bell-212 utility helicopters. Even with the additional equipment, however, the Maritime Safety Agency will have difficulty meeting the demands placed upon it, and by law Japan's regular naval forces can aid the maritime agency only under special circumstances and on the order of the Prime Minister.

This year's naval budget provides for an increase of about US \$140 million, or some 14 percent, over that of the previous year. The budget includes two frigates, a 2,200-ton submarine, one minelayer, two minesweepers, and three support ships. Funds for a new missile-armed destroyer, however, were withheld.

Maritime Self-Defense Force planners are giving high priority to improving submarine training programs, and they hope to acquire the ship-launched version of the US-made Harpoon missile for use on a new class of frigate to be built by a

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Japanese corporation. In addition, the navy is reported to be interested in obtaining missile-armed hydrofoil patrol craft from a US manufacturer.

The navy would also like to replace its P-2J fixed-wing antisubmarine aircraft with the advanced Lockheed P-3C. The Lockheed scandal set back acquisition of the first of a potential fleet of 60 to 70 of these aircraft last year, and a combination of political and budgetary limitations prevented a decision on procurement again this year. It will cost more than \$2 billion to replace the P-2Js, which will begin to reach the end of their service life by 1981.

If political factors continue to delay the purchase of the P-3C, pressures for the domestic design and production of an antisubmarine aircraft are likely to grow. This alternative would be costly and could postpone availability or replacement planes until the late 1980s.

Outlook. The air force and the navy will require additional strengthening if Japan's defense needs are to be met in the coming decade. Yet progress is likely to be slow. Proposals for additional naval ships and antisubmarine aircraft must compete with equally expensive requests for acquisition of advanced fighter-interceptors and an airborne early warning system. An attempt to purchase these weapons and systems too quickly would drive Japan's defense spending above the politically acceptable threshold of 1 percent of gross national product.

This year's total defense budget represents an increase of nearly 12 percent over last year's, but that increase will be eroded by inflation. Until a stronger consensus regarding defense programs evolves, the pace of Japan's efforts to improve the defensive capabilities of its navy and air force will continue to be slow and cautious.

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#### **Libvan President Grapples With Military** Manpower Stortage

The quantity and quality of manpower are now the major obstacles to President Qadhafi's ambitious plans to expand Libya's armed forces over the next few years. Although oil revenues allow him to continue massive purchases of weaponry, the military has too few men to operate the arms already on hand. The army, for example, has 1,900 medium tanks, yet only some 350 are assigned to combat units. Because Qadhafi intends to maintain an ample weapons reserve for such contingencies as providing arms aid to other Arab countries in any future war with Israel, this surplus is partly by design. But it is also symptomatic of the government's inability to resolve the longstanding problem of manpower for the military.

Unsuccessful Earlier Efforts. Qadhafi has tried various approaches to raising strength levels. Recruitment drives, the preferred method for several years, failed to attract enough young men even after standards for age and physical condition were relaxed. Military salaries were raised, but the still higher pay and more favorable working conditions in the civilian sector continued to make careers outside the armed forces more attractive for technically qualified Libyans. When compulsory military training was initiated in mid-1974, primarily for the purpose of developing a reserve system, Qadhafi anticipated-incorrectly-that a number of trainees would be motivated to enlist in the armed forces.

Conscription. The realization that nothing short of conscription would flesh out the military force structure finally impelled Qadhafi to call for a draft law in January 1976. He apparently had long favored it, saying publicly a few years earlier: "There should be conscription. We have...the most modern planes, but these have no pilots...nobody volunteers for the navy." In announcing the draft, Qadhafi made it clear that the shortages of manpower in the armed forces would be overcome "regardless of all circumstances," and that no group would be exempt from conscription.

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The conscription law has created problems for the military.

preinduction physicals had proven burdensome because of relatively large callups, and that some men had to wait up to two months to be examined. Housing and instructing the draftees are straining already limited resources. The armed forces are unable to keep up with the schooling requirements for the compulsory military training program, and the draft has sharply increased the demands placed on training facilities. At a time when the military should be

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upgrading instruction programs to ensure effective employment of advanced weapons systems, it is probably able to do little more than keep the quality of training from declining.

Impact on the Economy. Qadhafi will have to reckon with the effect on the economy of commandeering large numbers of men. A high illiteracy rate, the limited participation of women, and a low median age hold the labor force to about one-fourth the total population. This figure is too small to meet the demands of the economy, forcing Libya to import workers. About one-third of its 900,000-man labor force is made up of foreigners, who are heavily represented at professional, technical, and managerial levels. Any move to raise the requirement for educated and skilled conscripts, who are the ones of most interest to the military, will have to be accompanied by an increase in foreign workers.

Manpower almost certainly will remain an intractable problem. The government can ill afford to take steps that would endanger the economy, particularly the all-important oil industry. To continue the draft until the reported objective of having at least 100,000 men in uniform by 1980 is reached probably would have that effect.

Qadhafi's confrontations with Egyptian President Sadat complicate the matter. More than 20,000 of the Egyptians working in Libya have left since tensions increased between Cairo and Tripoli late this spring. Qadhafi has threatened to expel some of the Egyptians; a mass exodus of the remaining 230,000 would seriously hamper the progress of conscription, as Libyans otherwise available for armed service would have to replace them. This would strike a serious blow to the economy. Finally, dramatically increasing the size of foreign advisory contingents to compensate for personnel shortages is likely to be no more than a half measure, and Libya will still have far more weapons than men to use them.

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